

***Hister judaicus* sp. n., a new *Hister*-species (Coleoptera: Histeridae)
from Israel**

Slawomir MAZUR

Department of Forest Protection and Ecology, WULS,
Nowoursynowska 159, bld. 34, 02-776 Warszawa, Poland;
e-mail: slawomir.mazur@wl.sggw.pl

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Abstract. *Hister judaicus* sp. n. from Israel is described and illustrated. Additionally, its systematic position and ecological specialization is discussed.

INTRODUCTION

The genus *Hister* Linnaeus, 1758 still contains a number of species, having no unique and clearly discriminating character states, that is, it is a large complex genus. But phylogenetic survey of the genus, as regards the world species, is not satisfactory and needs detailed reexaminations. Little has been published on the biology of members of this genus. As with most histerids, the species are probably all predaceous, although feeding has actually been observed in only few instances. Several species are found primarily in the dung of large mammals. In addition to dung, there are numerous species associated with various types of vertebrate carrion. Several species have been found in association with rotting fungi and various types of fungi as well. Fimbration of the body margin is apparently an adaptation to psammophily and is a common feature among sand dwelling beetles. About 220 species, world widely distributed, 55 species are known to occur in the Palearctic Region (Mazur, 2004: 80-81).

The paper is based on the materials borrowed from the rich collection of Dr. Ludwig Erbeling.

ABBREVIATIONS USED

| | |
|-------------|---|
| CHLE | L. Erbeling's collection (Plettenberg, Germany); |
| CHSM | author' collection; |
| PE | length from the anterior pronotal margin to the elytral apex; |
| (0.1 - 2.0) | distance between punctures measured by their diameter. |



RESULTS

Hister judaicus sp. n.

(Figs 1-11)

Type material. Holotype (♂): Israel, Galil[ea], Mt. Meron, Ya'ar, Bar'am, N 33°02,369' E 35°25,438', 16.04.2005, Assmann leg. (CHLE). Paratypes: (3 specimens of both sexes): labeled as the holotype (2 CHLE, 1 CHSM).

Description. Body elongate-oval, (Fig. 1) convex, black, shiny. Length: PE 5.5-5.8 mm; total: 7.0-9.0 mm. Width: 5.0-5.3 mm.

Forehead flat, sometimes with some larger punctures on epistoma. Frontal stria (Fig. 2) complete, a little crenulate, inwardly angulate at middle and more or less interrupted here. Labrum as long as wide. Mandibles slightly convex. Antennae paler as body, scapus pitch-black, funicle brownish-red. Antennal club darker, tomentose, with two transverse sutures.

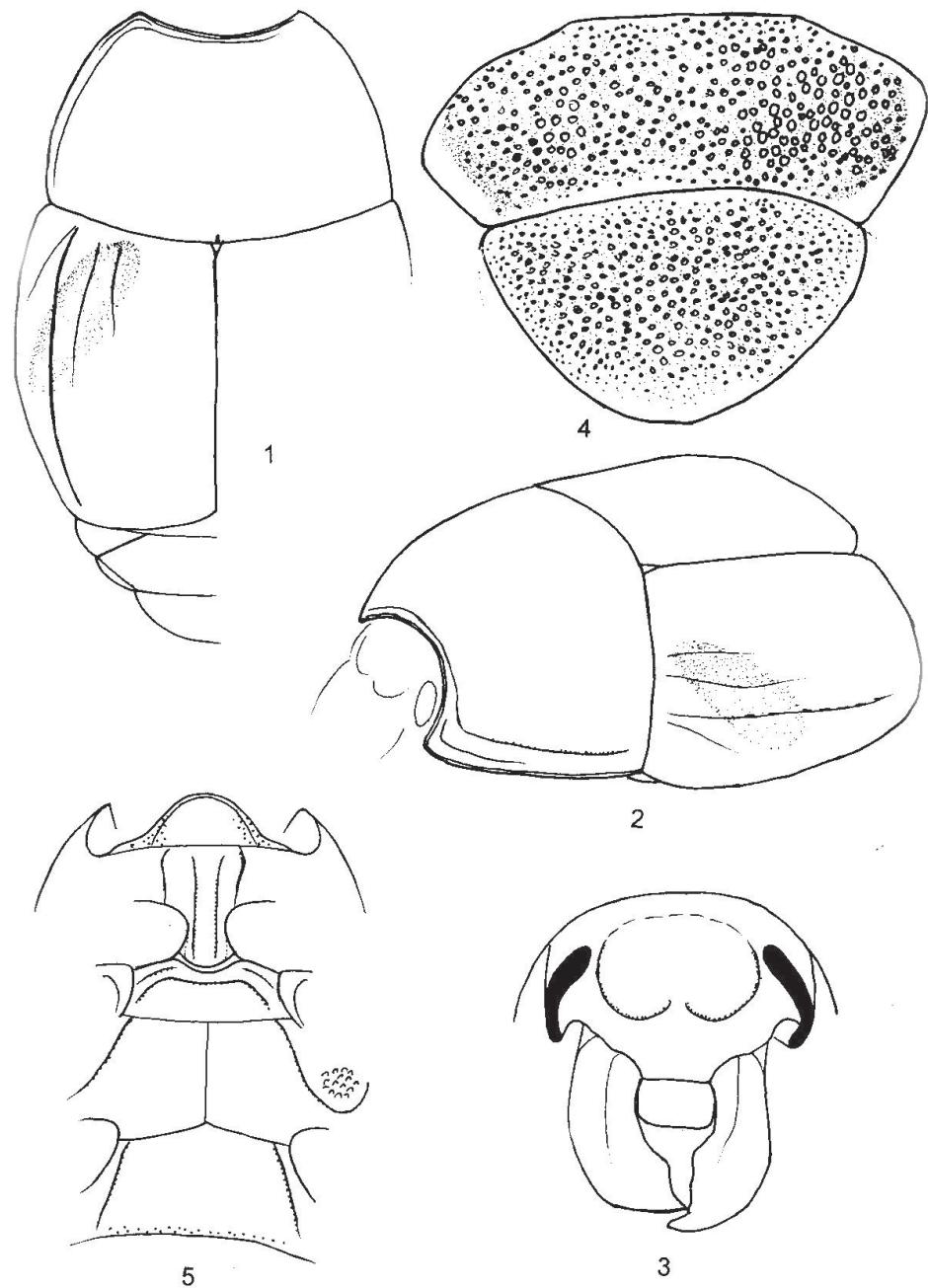
Pronotum narrowed anterad, emarginate at anterior margin. Marginal pronotal stria fine but distinct, not interrupted behind the head, reaching to the posterior pronotal angles. External pronotal stria shortened basally, present on apical 1/3. Internal pronotal stria deeply incised and crenulate, complete, parallel to the pronotal margin (Fig. 2). Pronotal base with a striiform fovea in front of scutellum. Epipleura concave, with some large punctures, not ciliate.

Elytra 1.5 times longer than pronotum, obliquely, shallowly incised at base. Epipleural fossete flat or feebly concave, very finely punctulate. Both marginal, elytral and epipleural striae complete, the elytral one very thin, the epipleural stria deeply incised. Oblique humeral stria thin, present on basal 1/3. Dorsal striae thin. First dorsal stria complete, sometimes crenulate at bottom. Second and third striae more or less oblique, abbreviated apically, the second one reaching almost to the elytral midlength, the 3rd present on basal 1/3. Sutural and subhumeral striae absent.

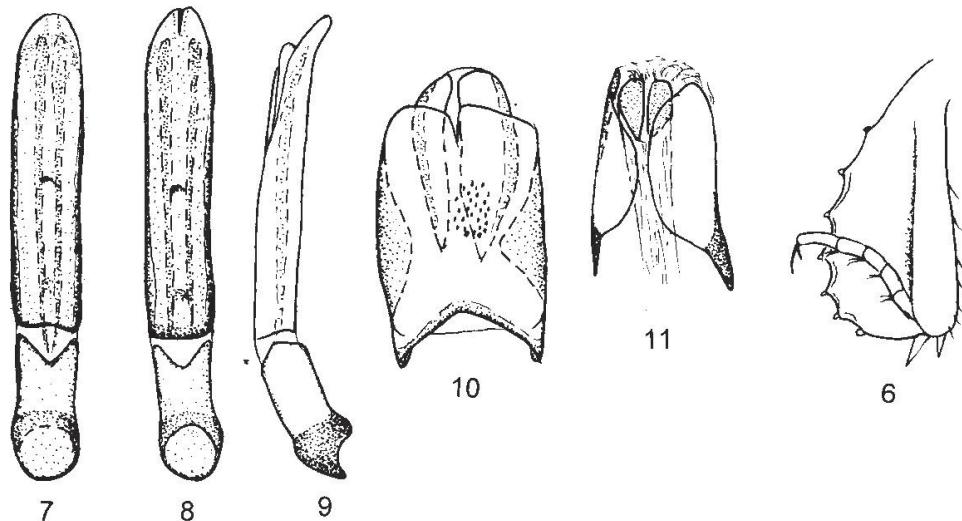
Pygidial segments (Fig. 4) a little convex. Propygidium feebly, shallowly concave at sides, its surface irregularly covered with coarse punctures (1.0-3.0). Pygidial punctuation less coarse, the pygidial apex nearly smooth. Propygidium and basal half of pygidium alutaceous.

Prosternal lobe (Fig. 5) rounded, distinctly margined anteriorly, shallowly and finely punctulate, more coarsely at sides. Prosternal keel finely and rarely punctulate. Carinal striae present, though sometimes indistinctly marked, nearly parallel at basal 2/3, a little divergent at apical 1/3.

Mesosternum emarginate anteriorly, finely and rarely punctulate. Marginal stria complete, deeply incised and crenate, not reaching the meso-metasternal suture. There are also two short, crenulate additional striae in anterolateral angles, parallel to the marginal stria. Mesometasternal suture subcariniform, sinuate. Metasternum as punctulated as mesosternum. Median line distinct. Transverse line at metasternal apex very thin and indistinct. The metasternal apex a little triangularly emarginate. Lateral metasternal stria subcariniform, crenate, extending obliquely and posteriorly, united arcuately with oblique stria which



Figs 1-5. *Hister judaicus* sp. n.: 1- upper side; 2- body, laterally; 3- head; 4- propygidium and pygidium, 5- under side.



Figs 6-11. *Hister judaicus* sp. n.: 6- foretibia; 7- aedeagus dorsally; 8- aedeagus ventrally; 9- aedeagus laterally; 10- 8th tergite; 11- 9th and 10th tergites.

extends inwards from metasternal-metepisternal suture. Lateral disc of metasternum densely covered with large and shallow punctures.

Intercoxal disc of 1st abdominal sternum distinctly margined laterally.

Legs paler than body, pitch-brown. Foretibia arcuately dilated (Fig. 6), with 7(+2) small spiny dents on outer margin. Mid- and hindtibia with two rows of numerous spinules at outer margin.

Male genital structure. Ratio of length of parameres to basal piece about 2.25, basal piece relatively long (Figs 7-9). Sides of parameres nearly parallel on basal 5/6, than convergent apically. Parameres fused on dorsal surface. Eighth tergite (Fig. 10) almost twice as long as wide. Ninth tergite (Fig. 11) with short postero-lateral projections. Tenth tergite irregularly pentagonal, divided into two parts.

Differential diagnosis. Unlikely to the majority of all known *Hister*-species (including all the Palearctic ones), *H. judaicus* has got several spinules at outer margin of the foretibia and not interrupted marginal pronotal stria (the feature being met in the Eudiplaster-species). Additionally, the complete carinal striae also discriminate it from the majority of Palearctic species.

DISCUSSION

Müller (1960: 53) listed only one species of *Hister*, *H. illigeri reductus* Müller, 1960 and since this time no other species has been recorded from Israel. *Hister judaicus* occupies a very isolated position in the genus *Hister*. The complete marginal pronotal stria shares it

with *H. lugubris* Truqui, 1852 whereas the presence of carinal striae is to be found in *Hister mediterraneus* Lundgren, 1991 as well as in “servus” group which is endemic to the New World (Caterino, 1999: 351).

The structure of foretibia is very unique being met only in the genus *Margarinotus* Marseul, 1853, especially in the subgenus *Grammostethus* Lewis, 1906. The multispinose foretibia are known only in Chilean *Hister araucanus* Caterino et Arriagada (2003: 68) but this is a completely different species, showing a closer relationship with members of the Neotropical “cosenosus” group.

Some affinities in the elytral striae are also expressed as compared with Oriental species (*H. nepalensis* Mazur, 1997; *H. pteromalus* Marseul, 1861; *H. shanghaicus* Marseul, 1861).

An ecological specialization is also unclear. The lack of hypomeral pilosity shows any kind of adaptation for psammophily. Judging from the structure of foretibia and mandibles it seems to be a predator connected with forest habitat, occurring on sap, fungi or in decaying litter/vegetable matter.

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